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EXAMINER

TRAN, KHUONG N

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4177

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/785,233

Applicant(s)

NASSAR, AYMAN ESAM

Examiner

Khuong Tran

Art Unit

4177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>24 February 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Harrisville-Wolff et al (US Patent No. 6,950,847).

Regarding claim 1, Harrisville-Wolff et al disclose in **Figure 1** a communication network **132** consisting of a first network **104** associated with a first service provider **136**, a second network **116** associated with a second service provider **148**. The first and second networks, also called client systems, include virtual service mechanisms **108**, **120** for recognizing and executing service proxies **112**, **124**. Client systems have a plurality of resources since they include one or more user nodes each utilizing an operating system (OS) with user interfaces, and running applications and including installed patches [**column 5, lines 40-47**].

According to the teaching, both networks are capable of receiving requests for inter provider IP services. The client networks includes a virtual service mechanism for

Art Unit: 4177

registering as a recipient with the service manager, transmitting the service requests, and recognizing and executing the service proxies received in response to the service requests **[column 3, lines 29-34]**. Moreover the service providers **136, 148** dictate where the proxy code for the registered service is to be loaded, which allows it to act as an HTTP server or to rely on a separate server device) **[column 7, lines 50-54]**.

Therefore, the client systems communicate directly with the service providers during service performance. Data is typically communicated in digital format following standard protocols, such as TCP/IP as disclosed in the teaching **[column 5, 37-40]**.

Harrisville-Wolff et al also disclose that in some cases, a master server provides on going monitoring utilizing an application installed and executing on the client device to determine when updates or patches may be beneficial. Overall, the master server functions to distribute and install updated application packages through one of more intermediate distribution servers and over the communication network to the appropriate client network devices. It is noted that client network devices may be an end user device such as a personal computer, computer workstation, or any electronic computing device **[column 1, lines 44-57]**. Since the master server constantly monitors the network, it serves as a mean to determine real time availability of the resources from both networks for inter provider IP service such as delivering updates and patches to make sure the client devices stayed up to date.

Furthermore, **Figure 3** outlines the operation of an exemplary system **200** by allowing efficient, automatic service provision to a client server **204 [column 10, lines 18-21]**. The process begins at the installed patch tool **226** located in the virtual service

Art Unit: 4177

mechanism **224** of the client server network **[Figure 2]**. The patch tool **226** subsequently executes to transmit a service request to the service manager **240** via the communication network **208**. The service manager **240** initiates the patch and upgrade delivery services **274** by delivering the patch and upgrade delivery proxy **260** for execution as the proxy **228** on the virtual service mechanism **224**. At this point, the client server **204** communicates directly with the service provider **270** to obtain and complete the service functions **[column 10, lines 21-37]**. Finally, the service provider **270** via the temporarily resident proxy **228** returns recommended patches and upgrades to the client server **204**. The patches and OS applications maybe automatically installed on the client server **204** and network devices **220** as indicated without input or interaction from operator of the client network **[column 10, lines 53-64]**. Therefore, based on the exemplary system of the client network **204**, it is evident that both networks mentioned above are capable of provisioning inter-provider IP service using the resources in the networks.

Regarding claim 11, Harrisville-Wolff et al disclose in **Figure 1** the communication system consists of service providers **136, 148** that are capable of handling service requests from client networks **104, 116** through the service manager **160 [column 6, lines 18-25, 36-39]**.

Harrisville-Wolff et al also disclose that in some cases, a master server provides on going monitoring utilizing an application installed and executing on the client device to determine when updates or patches may be beneficial. Overall, the master server functions to distribute and install updated application packages through one of more

Art Unit: 4177

intermediate distribution servers and over the communication network to the appropriate client network devices. It is noted that client network devices may be an end user device such as a personal computer, computer workstation, or any electronic computing device [column 1, lines 44-57]. Since the master server constantly monitors the network, it serves as a mean to determine real time availability of the resources from both networks for inter provider IP service such as delivering updates and patches to make sure the client devices stayed up to date.

Furthermore, **Figure 3** outlines the operation of an exemplary system **200** by allowing efficient, automatic service provision to a client server **204** [column 10, lines 18-21]. The process begins at the installed patch tool **226** located in the virtual service mechanism **224** of the client server network [Figure 2]. The patch tool **226** subsequently executes to transmit a service request to the service manager **240** via the communication network **208**. The service manager **240** initiates the patch and upgrade delivery services **274** by delivering the patch and upgrade delivery proxy **260** for execution as the proxy **228** on the virtual service mechanism **224**. At this point, the client server **204** communicates directly with the service provider **270** to obtain and complete the service functions [column 10, lines 21-37]. Finally, the service provider **270** via the temporarily resident proxy **228** returns recommended patches and upgrades to the client server **204**. The patches and OS applications maybe automatically installed on the client server **204** and network devices **220** as indicated without input or interaction from operator of the client network [column 10, lines 53-64]. Therefore, based on the exemplary system of the client network **204**, it is evident that both

Art Unit: 4177

networks mentioned above are capable of provisioning inter-provider IP service using the resources in the networks.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrisville-Wolff et al. (US Patent No. 6,950,847) and further in view of Xu et al. (US Publication No. 2004/0085912).

Regarding claim 2, Harrisville-Wolff et al teaches a communication network capable of monitoring the client devices and providing update services as stated in claim 1 [**column 1, lines 44-57**]. However, Harrisville-Wolff et al fail to teach the means for advertising the available network resources. Xu et al disclose an autonomous system topology based auxiliary network for a peer-to-peer overlay network. According to the teaching, the network supports expressway connections that between expressway nodes [**paragraph 0010**]. When a node joins an expressway, it may advertise its position relative to the grid falls into. As a result, the amount of routing information may be minimized by reducing the size of the routing table [**paragraph 0042, lines 5-10**]. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to enable the advertisement of available network resources from both networks as taught by Xu et

Art Unit: 4177

al. One is motivated as such to propagate routing information when nodes join or leave or when network conditions change, to resolve routing destinations, and to forward information packets for multicasting for better IP routing performance **[paragraph 0024, lines 7-11]**.

Regarding claim 12, Harrisville-Wolff et al teaches a communication network capable of monitoring the client devices and providing update services as stated in claim 1 **[column 1, lines 44-57]**. However, Harrisville-Wolff et al fail to teach the means for advertising the available network resources of the service providers. Xu et al disclose an autonomous system topology based auxiliary network for a peer-to-peer overlay network. According to the teaching, the network supports expressway connections that between expressway nodes **[paragraph 0010]**. When a node joins an expressway, it may advertise its position relative to the grid falls into. As a result, the amount of routing information may be minimized by reducing the size of the routing table **[paragraph 0042, lines 5-10]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to enable the advertisement of available network resources from both service providers as taught by Xu et al. One is motivated as such to propagate routing information when nodes join or leave or when network conditions change, to resolve routing destinations, and to forward information packets for multicasting for better IP routing performance **[paragraph 0024, lines 7-11]**.

Art Unit: 4177

5. Claims 3-10, 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrisville-Wolff et al. (US Patent No. 6,950,847) and further in view of Ramstrom et al. (US Patent No. 5,960,004).

Regarding claim 3, Harrisville-Wolff et al teach in **Figure 1** a telecommunication network **132** connecting client systems **104** to **116** between service providers **136** and **148** through a number of supporting network components **128**, **164**, **188**, and **160**.

However, Harrisville-Wolff et al fail to explicitly disclose a unified and integrated switch (UIS) device connected to the first network and second network which consists of a common resources that are being dedicated to and configured by either network.

However, Ramstrom et al teach a switch component **52** in **Figure 6** that connects a plurality of network nodes **53**, **54**, **55**, and **56**. According to the teaching, the switch **52** consists of application modules **65**, **66**, and **67** to handle the functions of the networks connecting to it. The switch further includes common resources **69** being dedicated to each network node [**Figure 6, column 8, lines 30-52**]. Additionally Ramstrom et al show that the switch can support different services for the many network nodes as long as the required software is added to the application modules [**column 2, lines 14-21**].

Since the common resources are accessible by network modules, it is evident that the sources can be configured according to the service a particular network node is compatible with. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to include a switch for connecting the networks and for configuring the shared resources as taught by Ramstroms et al. One is motivated as such to allow multiple specific telecommunica-

tion applications to be performed with optimum functionality within the same switch device **[column 3, lines 10-15]**.

Regarding claim 4, Harrisville-Wolff et al disclose the service providers are linked to the communication network to allow communication to the service manager and direct communication to the client servers when providing a service. Harrisville-Wolff et al however fail to teach a switch being a part of the communication system as stated in claim 3 in addition to having such switch consisting logical nodes be dynamically configured by and associated with service providers. Ramstrom et al illustrates in **Figure 6** a software system of the network consisting of a single exchange **51** having a plurality of separate logical nodes and functionality of those nodes and interconnections between them is incorporated into single exchange **52** containing the software system **[column 8, lines 11-58]**. It was stated in the preceding claim 3 that part **52** is a switch consisting of different modules supporting a variety of services according to the network nodes. Since single exchange **53** is functionally dependent on the switch device **52** for service, it is evident that the logical nodes are a part of the switching entity. It is also noted that a switch can render different services to their respective subscribers by having the switch programmed with the functionality required for each type of telecommunication service to be rendered **[column 2, lines 6-13]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to associate a first logical node to a first service provider and having the service provider configuring the node to offer services compatible to its client network and to associate a second logical node to a second

Art Unit: 4177

service provider and having the service provider configuring the node to offer services compatible to its client network. One is motivated as such to perform the specific functional actions required to implement assigned service elements **[column 3, lines 64-67]**.

Regarding claim 5, as already stated in claims 3 and 4, the switch device **52** connects the first and second networks and able to configure by the service providers within those networks. Therefore, official notice is taken here since the switch has to reside within one network in order to function accordingly. Harrisville-Wolff et al. teach the functions of multiple networks in a communication system **132** in **Figure 1**.

However, Harrisville-Wolff et al fail to specifically classify the first network as the wholesale service provider and the second network as the retail service provider.

Ramstrom et al disclose in **Figure 5** an illustrative diagram of multiple networks, or exchanges interconnected with one another in a communication network. It is disclosed that a local exchange **31** serves its local subscribers, or end users, and connected via trunk lines to another **33**, which is in turn connected to the international gateway exchange **34**. The international exchange **38**, for example, consists national exchange **40** which includes a plurality of subscribers and are connected by means of trunk lines **41** **[column 7, lines 55-64]**. Since the marketplace reflects the reality that supporting services between local subscribers between different geographical locations is commonplace, it would have been obvious to one with ordinary skill in the art of telecommunication to recognize the first network with the switch as the international exchange **38** as the wholesale service provider that provides service to the second

Art Unit: 4177

network, a retail service provider **40** at a national level, which in turn provides services to its local subscribers as shown in Ramstrom et al, in order to gain the commonly understood benefits of such adaptations, such as reduced expense costs, simplified operation, and increased optimum performance and reliability.

Regarding claim 6, Harrisville-Wolff et al teach a telecommunication network connecting client systems between service providers through a number of supporting network components. However, Harrisville-Wolff et al fail to teach a mean for calculating cost information for use of the first resources and the second resources for the inter-provider IP services. Ramstrom et al disclose in **Figure 33** a block diagram of service application modules **121-126** with a number of access modules **139-144** for billing transactions. According to the teaching, service application modules function to provide services such as digit analysis, routing, and unique communication services which are specifically configured for the telecommunication services they are designed. Each of the access application modules **139-144** provides includes functionality such as protocol analysis, hardware maintenance, and line maintenance. In addition, the transaction manager **146** provides interfaces between different application modules and enables communication between them. The charging manager **147** provides services to the application modules connected with the charging of calls in a manner related to common charging elements to each of the application modules. Thus the transaction manager **146** and charging manager **147** are the means for calculating the cost information of the inter-provider IP service between two network resources [**Figure 33, column 38, lines 22-63**]. Therefore, it would have been obvious to one with ordinary

Art Unit: 4177

skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to include means for calculating cost information such as a transaction manager and charging manager application modules as taught by Ramstrom et al. One is motivated as such to introduce new technologies and upgrades constantly to the already existing telecommunication network by modifying the previously designed application modules **[column 37, lines 15-20]**.

Regarding claim 7, from previous claim 6, it is stated that Harrisville-Wolff et al fail to include a means for calculating cost information between network resources in the communication system. In addition, there is no means for creating an electronic contract between service providers using the cost information. Ramstrom et al disclose in the teaching that for each chargeable event or transaction occurring between network resources, an account record is obtained within the application module by charging account record subsystem **171**. The account reference **172** can then be used by this and other application modules to store data related to the charging of a particular call or event. If required, meter pulses can be generated in real time or calculated at the end of the call based upon the charging information received from the application modules **122-124**. This can be used for output to a subscriber's charging account record as required **[Figure 38, column 41, lines 45-56]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to incorporate the means to generate an electronic contract between service providers using the cost information as taught by Ramstrom et al. One is motivated as such to provide necessary servicing functions to integrate charging

functionality to existing application module via existing interfaces with new application modules via new interfaces [**column 41, lines 35-39**].

Regarding claim 8, Harrisville-Wolff et al disclose in the teaching that there exists a software tool **260** that is configured to look up or retrieve services that are registered with the service manager **240**. The registered proxy **260** is provided by the service provider **270** and is executable code such as a Java object, that includes an interface defining the methods provided and which can be requested from the service. The proxy **260** typically will also provide initial attributes for the service **274** [**Figure 2, column 9, lines 35-43**]. Thus, the software engine is configured to receive request for the inter-provider IP service and to obtain real time resource information. Harrisville-Wolff et al, however, fail to explicitly teach the method of calculating real time prices for each of the pricing scenarios using the real time resource information and customizing the cost information based on the first and second service providers, the request, and the real time prices. Based from previous claims 6 and 7, Ramstrom et al disclose a method for calculating cost information by configuring software in the application service modules such as transaction manager and charging manager to generate a record of the cost to the subscriber's account [**column 38, lines 22-63, column 41, lines 45-56**]. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-Wolff et al to include service application modules such as a transaction manager and a charging manager to serve as the means for calculating real time price scenarios as taught by Ramstrom et al based on service providers, requests, and real time prices. One is motivated as such to introduce new

Art Unit: 4177

technologies and upgrades constantly to the already existing telecommunication network by modifying the previously designed application modules **[column 37, lines 15-20]**.

Regarding claim 9, Harrisville-Wolff et al teach a communication network consisting of a database **[Figure 1, 144, 156]** for storing real-time resource information. According to the teaching the service databases include service data or useful information in providing implemented service **140, 152 [column 6, lines 53-64]**.

Regarding claim 10, Harrisville-Wolff et al disclose in **Figure 2** an operational support system **240** connected to software engine **260** and databases **276, 278 [Figure 2]**. It is further noted that the operational support system **240** consists of a service deployment mechanism **256**, which provides for actively discovering client devices desiring and set up to receive services which are stored in memory. The mechanism **256** also discovers or receives registration requests from providers actively providing services, such as service provider **270 [Figure 2, column 9, lines 30-35]**. Hence the operational support system can be configured to manage the inter-provider IP service in real-time.

Claim 13 is rejected for similar subject matter as claim 3.

Claim 14 is rejected for similar subject matter as claim 4.

Claim 15 is rejected for similar subject matter as claim 5.

Claim 16 is rejected for similar subject matter as claim 6.

Claim 17 is rejected for similar subject matter as claim 7.

Claim 18 is rejected for similar subject matter as claim 8.

Art Unit: 4177

Claim 19 is rejected for similar subject matter as claim 9.

Claim 20 is rejected for similar subject matter as claim 10.

Regarding claim 21, based on previous claim 11 it was concluded that the communication system taught by Harrisville-Wolff et al is capable of incorporating the network infrastructure **[Figure 2, 200]** and resources **[Figure 2, 220]** in the automatic service provisioning process **[column 10, lines 18-21]**. Harrisville-Wolff et al, however, fail to explicitly teach such provisioning factor is also dependent on business relations and business objectives. Ramstrom et al disclose the business relations between two service providers are outlined in dynamic, real-time transactions where contracts and prices are created as a result of the business relation **[column 41, lines 45-56]**. Business objectives are also a part of the teaching since the telecommunication network is capable of supporting a variety of services such as ISDN, PSTN, private network and so forth **[Figure 6]**. Therefore, service volume for the different network nodes dictates one of the important aspects in business objectives. Furthermore, Ramstrom et al explain the goal of expanding functionality in a telecommunication system by upgrading hardware components and adding new software capabilities is often undesirable since telecommunication companies are interested in minimizing cost while maintaining the quality of service offered to their subscribers **[column 2, 36-42]**. Ramstrom et al propose a method to reduce expenses by implementing application modules that can be programmed by software to support a variety of services as required by the different network **[column 2, lines 14-21]**. Therefore, it would have been obvious to one with ordinary skill in the art at the time of the invention to modify the teaching of Harrisville-

Art Unit: 4177

Wolff et al to include business relations and business objectives in the provision of network services. One is motivated as such to provide necessary servicing functions to integrate functionality to existing application module via existing interfaces with new application modules via new interfaces [column 41, lines 35-39] and to enable efficacious growth of future communication services [column 42, lines 27-31].

Conclusion

6. Any response to this Office Action should be **faxed** to (571) 273-8300 or **mailed** to:

Commissioner for Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-Delivered responses should be brought to
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khuong Tran, whose telephone number is (571) 270-3522. The examiner can normally be reached Mon-Fri from 7:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Q. Tieu, can be reached at (571) 272-7490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published


Art Unit: 4177

application may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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AU 4177

October 10, 2007


BENNY Q. TIEU
SPE/TRAINER